

# **[ Method and Apparatus for Controlling Hydrocarbon Injection Into Engine Exhaust To Reduce NOx ]**

## **Abstract of Disclosure**

A method and system for controlling hydrocarbon injection into engine exhaust to reduce NOx. The method and system inject the hydrocarbon into the engine exhaust in accordance with detection of a light-off event. The light-off event can be detected because when there is this hydrocarbon-O<sub>2</sub> reaction, such reaction is an exothermic reaction and thus heat is generated and given off. The generation of such heat may be detected by here measuring the difference in temperature across the catalyst. The peak in NOx conversion efficiency temperature changes with age. However, because the peak in NOx conversion efficiency temperature occurs at substantially the same temperature light-off, a determination of light-off by the system and method enables adjustment in the hydrocarbon injection level for maximum NOx reduction efficiency.